

WHAT IS CLAIMED IS:

1. A liquid cleaning solution comprising:
 - (a) from greater than 0 to about 90 percent by weight water;
 - (b) one or more surfactants selected from the group consisting of coconut-based soap solutions; ethoxylated alcohols having C₆₋₂₄ moieties and up to about 12 ethoxylate groups; propoxylated cationic ammonium compounds; and a combination thereof;
 - (c) up to 95 percent by weight of one or more solvents other than water; and
 - (d) at least one material selected from the group consisting of xanthan gum thickener, acrylic polymer thickener, and sodium iminodisuccinate;wherein all percents by weight are based on a total weight of the liquid cleaning solution.
2. The liquid cleaning solution of Claim 1, wherein the liquid cleaning solution further comprises at least one pH control agent in an amount to provide a liquid cleaning solution pH of from about 8.0 to about 13.0.
3. The liquid cleaning solution of Claim 1, wherein the liquid cleaning solution further comprises one or more additives selected from a dye, a perfume, a preservative, a foam control agent, and combinations thereof.
4. The liquid cleaning solution of Claim 1, wherein the liquid cleaning solution comprises:
 - (a) from greater than 0 to about 70.0 percent by weight of water;
 - (b) from greater than 0 to about 75.0 percent by weight of triethylene glycol, glycerin, or a combination thereof;

(c) from greater than 0 to about 40.0 percent by weight of a solution of potassium carbonate in water; and

(d) from greater than 0 to about 10.0 percent by weight of a coconut-based soap solution;

wherein all percents by weight are based on a total weight of the liquid cleaning solution.

5. The liquid cleaning solution of Claim 4, wherein the liquid cleaning solution comprises:

(a) from about 12.0 to about 25.0 percent by weight of water;

(b) from about 50.0 to about 65.0 percent by weight of triethylene glycol, glycerin, or a combination thereof;

(c) from about 10.0 to about 25.0 percent by weight of a solution of potassium carbonate in water having 47 percent by weight of potassium carbonate; and

(d) from about 0.5 to about 6.0 percent by weight of a coconut-based soap solution;

wherein all percents by weight are based on a total weight of the liquid cleaning solution.

6. The liquid cleaning solution of Claim 5, wherein the liquid cleaning solution further comprises xanthan gum thickener in an amount of up to about 2.0 percent by weight, based on a total weight of the liquid cleaning solution.

7. The liquid cleaning solution of Claim 6, wherein the liquid cleaning solution comprises:

(a) about 15.0 percent by weight of water;

(b) about 64.0 percent by weight of glycerin;

(c) about 20.0 percent by weight of a solution of potassium carbonate in water having 47 percent by weight of potassium carbonate;

(d) about 1.0 percent by weight of a coconut-based soap solution; and

(e) about 0.125 percent by weight of a xanthan gum thickener;

wherein all percents by weight are based on a total weight of the liquid cleaning solution.

8. The liquid cleaning solution of Claim 5, wherein the liquid cleaning solution further comprises an acrylic polymer thickener in an amount of up to about 5.0 percent by weight, based on a total weight of the liquid cleaning solution.

9. The liquid cleaning solution of Claim 8, wherein the liquid cleaning solution comprises:

- (a) about 21.0 percent by weight of water;
- (b) about 40.0 percent by weight of glycerin;
- (c) about 15.0 percent by weight of triethylene glycol;
- (d) about 15.0 percent by weight of a solution of potassium carbonate in water having 47 percent by weight of potassium carbonate;
- (e) about 5.0 percent by weight of a coconut-based soap solution; and
- (f) about 4.0 percent by weight of an acrylic polymer thickener;

wherein all percents by weight are based on a total weight of the liquid cleaning solution.

10. The liquid cleaning solution of Claim 8, wherein the liquid cleaning solution comprises:

- (a) about 15.0 percent by weight of water;
- (b) about 40.0 percent by weight of glycerin;
- (c) about 15.0 percent by weight of triethylene glycol;
- (d) about 20.0 percent by weight of a solution of potassium carbonate in water having 47 percent by weight of potassium carbonate;
- (e) about 5.0 percent by weight of a coconut-based soap solution; and

(f) about 5.0 percent by weight of an acrylic polymer thickener;

wherein all percents by weight are based on a total weight of the liquid cleaning solution.

11. The liquid cleaning solution of Claim 1, wherein the liquid cleaning solution comprises:

(a) from greater than 0 to about 70.0 percent by weight of water;

(b) from greater than 0 to about 25.0 percent by weight of an ethoxylated alcohol having C₁₃₋₁₅ moieties and about 7 ethoxylate groups;

(c) from greater than 0 to about 6.0 percent by weight of an ethoxylated alcohol having C₁₂₋₁₄ moieties and about 3 ethoxylate groups; and

(d) from greater than 0 to about 10.0 percent by weight of a propoxylated cationic ammonium compound;

wherein all percents by weight are based on a total weight of the liquid cleaning solution.

12. The liquid cleaning solution of Claim 11, wherein the liquid cleaning solution further comprises sodium iminodisuccinate.

13. The liquid cleaning solution of Claim 12, wherein the liquid cleaning solution comprises:

(a) from about 40.0 to about 60.0 percent by weight of water;

(b) from about 11.0 to about 17.0 percent by weight of an ethoxylated alcohol having C₁₃₋₁₅ moieties and about 7 ethoxylate groups;

(c) from about 1.0 to about 5.0 percent by weight of an ethoxylated alcohol having C₁₂₋₁₄ moieties and about 3 ethoxylate groups;

(d) from about 4.0 to about 10.0 percent by weight of a propoxylated cationic ammonium compound; and

(e) from about 20.0 to about 30.0 percent by weight of sodium iminodisuccinate;

wherein all percents by weight are based on a total weight of the liquid cleaning solution.

14. The liquid cleaning solution of Claim 13, wherein the liquid cleaning solution comprises:

- (a) about 50.7 percent by weight of water;
- (b) about 14.3 percent by weight of an ethoxylated alcohol having C₁₃₋₁₅ moieties and about 7 ethoxylate groups;
- (c) about 3.0 percent by weight of an ethoxylated alcohol having C₁₂₋₁₄ moieties and about 3 ethoxylate groups;
- (d) about 6.6 percent by weight of a propoxylated cationic ammonium compound; and
- (e) about 25.4 percent by weight of sodium iminodisuccinate;

wherein all percents by weight are based on a total weight of the liquid cleaning solution.

15. A use solution comprising from about 1 to 100 parts of the liquid cleaning solution of Claim 13 per about 100 parts of at least one dilution solvent.

16. The use solution of Claim 15, wherein the at least one dilution solvent comprises water.

17. The liquid cleaning solution of Claim 5, wherein the liquid cleaning solution (i) is stable for at least 120 seconds at a temperature of up to about 262.8°C (505°F); (ii) is substantially free of splattering at temperatures of up to about 262.8°C (505°F); (iii) is substantially free of smoke at temperatures of up to about 262.8°C (505°F); and (iv) is substantially free of residue at temperatures up to about 262.8°C (505°F).

18. The liquid cleaning solution of Claim 11, wherein the liquid cleaning solution cleans cooking surfaces at room temperature (22°C, 72°F).

19. A method of cleaning a cooking surface having a surface temperature of up to about 262.8°C (505°F), wherein the method comprises:

(i) covering at least a portion of the cooking surface with a liquid cleaning solution, wherein the liquid cleaning solution comprises:

(a) from greater than 0 to about 90 percent by weight water;

(b) one or more surfactants selected from the group consisting of coconut-based soap solutions; ethoxylated alcohols having C₆₋₂₄ moieties and up to about 12 ethoxylate groups; propoxylated cationic ammonium compounds; and a combination thereof;

(c) up to 75 percent by weight of one or more solvents other than water; and

(d) at least one material selected from the group consisting of xanthan gum thickener, acrylic polymer thickener, and sodium iminodisuccinate;

wherein all percents by weight are based on a total weight of the liquid cleaning solution;

(ii) letting the liquid cleaning solution remain on the cooking surface for at least one second; and

(iii) removing the liquid cleaning solution from the cooking surface.

20. The method of Claim 19, wherein the liquid cleaning solution comprises:

(a) about 15.0 percent by weight of water;

(b) about 64.0 percent by weight of glycerin;

(c) about 20.0 percent by weight of a solution of potassium carbonate in water having 47 percent by weight of potassium carbonate;

(d) about 1.0 percent by weight of a coconut-based soap solution; and

(e) about 0.125 percent by weight of a xanthan gum thickener;

wherein all percents by weight are based on a total weight of the liquid cleaning solution.

21. The method of Claim 19, wherein the liquid cleaning solution comprises:

- (a) about 21.0 percent by weight of water;
- (b) about 40.0 percent by weight of glycerin;
- (c) about 15.0 percent by weight of triethylene glycol;
- (d) about 15.0 percent by weight of a solution of potassium carbonate in water having 47 percent by weight of potassium carbonate;
- (e) about 5.0 percent by weight of a coconut-based soap solution; and
- (f) about 4.0 percent by weight of an acrylic polymer thickener;

wherein all percents by weight are based on a total weight of the liquid cleaning solution.

22. The method of Claim 19, wherein the liquid cleaning solution comprises:

- (a) about 15.0 percent by weight of water;
- (b) about 40.0 percent by weight of glycerin;
- (c) about 15.0 percent by weight of triethylene glycol;
- (d) about 20.0 percent by weight of a solution of potassium carbonate in water having 47 percent by weight of potassium carbonate;
- (e) about 5.0 percent by weight of a coconut-based soap solution; and
- (f) about 5.0 percent by weight of an acrylic polymer thickener;

wherein all percents by weight are based on a total weight of the liquid cleaning solution.

23. The method of Claim 19, wherein the liquid cleaning solution comprises:

- (a) about 50.7 percent by weight of water;

(b) about 14.3 percent by weight of an ethoxylated alcohol having C₁₃₋₁₅ moieties and about 7 ethoxylate groups;

(c) about 3.0 percent by weight of an ethoxylated alcohol having C₁₂₋₁₄ moieties and about 3 ethoxylate groups;

(d) about 6.6 percent by weight of a propoxylated cationic ammonium compound; and

(e) about 25.4 percent by weight of sodium iminodisuccinate;

wherein all percents by weight are based on a total weight of the liquid cleaning solution.

24. The method of Claim 19, wherein the liquid cleaning solution is applied onto a cooking surface having a surface temperature of from about 93.3°C (200°F) to about 262.8°C (505°F).

25. The method of Claim 19, wherein the liquid cleaning solution is applied onto a cooking surface having a surface temperature of about 22°C (72°F).

26. The method of Claim 19, wherein the cooking surface is a portion of a grill or toaster.